

L3(5.3) - Curves of Best Fit

Ex.1 The table shows the number of hours of daylight in Waterloo, Ontario, for the first day of each month in 2005.

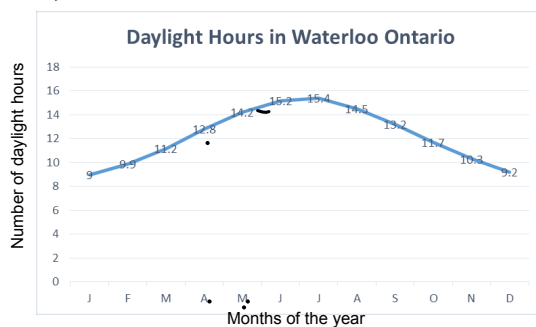
Month	Jan	Feb	Mar	April	May	June	July	Aug	Sep	Oct	Nov	Dec
Daylight hours	9.0	9.9	11.2	12.8	14.2	15.2	15.4	14.5	13.2	11.7	10.3	9.2

a) What trend do you see in the data? Explain the trend.



The number of daylight hours increases from January to July, then decreases from July to December

b) Graph the data. Draw a curve of best fit.



c) Estimate the number of hours of daylight on March 15.

14.2

d) The day with the most daylight is June 21.

Estimate the number of hours of daylight on June 21.

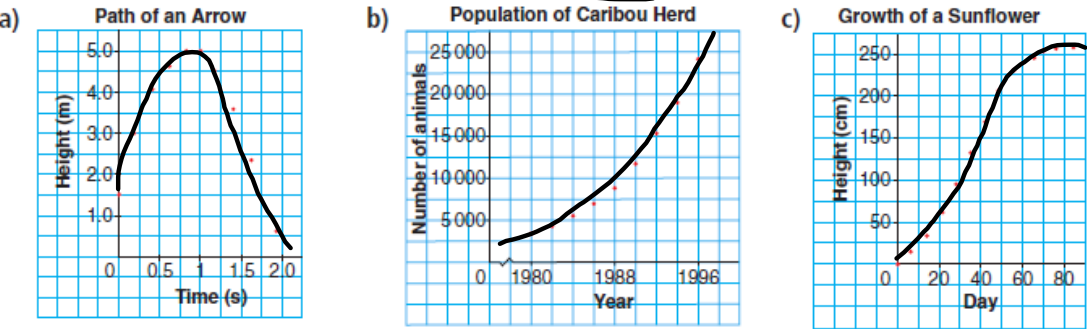
15.4

e) Estimate the number of hours of daylight on your birthday.
How did you do this?

15.3 Ahmed
14.8 Tristan
12.0 Khalid
14.85 Rich

Ex.2:

Describe any trends in the data. Draw a curve of best fit for each set of data.



As the time increases, the height increases, then decreases.

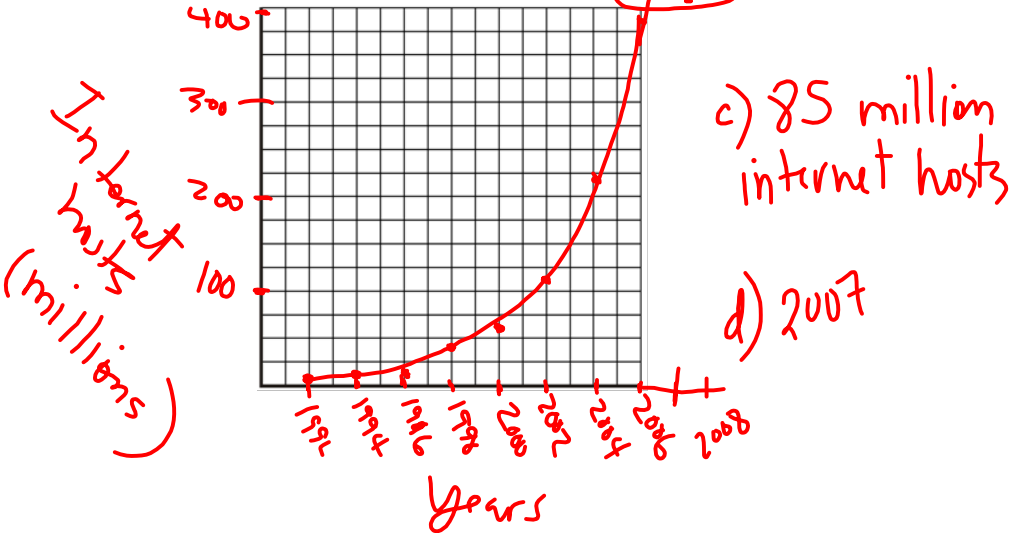
As the time increases, the number of animals increase

As the time increases, the height increases, then decreases.

Ex.3: An Internet host is a computer directly connected to the Internet.
The number of Internet hosts around the world has grown quickly.
The data in the table are for January of each given year.

Year	1992	1994	1996	1998	2000	2002	2004	2006
Internet hosts (millions)	0.7	2.2	9.5	29.7	72.4	147.3	233.1	395.0

- a) What trend do you see in the data? Explain the trend.
- b) Graph the data. Draw a curve of best fit.
- c) Estimate the number of Internet hosts in 2001.
- d) When might the number of Internet hosts reach 500 million? Justify your answer.



Ex.4: The high divers at Paramount Canada's Wonderland perform competitive dives from a height of 21 m. A diver's height is measured every 0.2 s.

Time (s)	0	0.2	0.4	0.6	0.8	1.0	1.2
Height (m)	21	20.7	20.2	19.4	17.6	16	14

- a) What trend do you see in the data? Explain the trend.
- b) Graph the data. Draw a curve of best fit.
- c) Estimate when the diver will be 10 m above the water.
- d) When does the diver reach the pool? How do you know?

